Before the
Federal Communications Commission
Washington, DC

In re Matter of

Amendment of Section 73.606(b), Table of Allotments, TV Broadcast Stations (Charleston, West Virginia)	))))	RM-

To: Chief, Allotments Branch

PETITION FOR ISSUANCE OF SHOW CAUSE ORDER

WKRP-TV, Inc., by its attorneys, hereby respectfully requests the issuance of a Show Cause Order ordering WKRP-TV to show cause why it should not be ordered to commence operations on Channel 23 in lieu of Channel 29 in Charleston, West Virginia, and that the Television Table of Allotments simultaneously be amended to delete Channel 29, Charleston, West Virginia. In support thereof, the following is stated:

The NTSC Television Table of Allotments[1] for Charleston, West Virginia currently reads as follows:

City	Channels
Charleston, WV	8+, 11+, 23, 29, *49-

WKRP-TV, Inc. is the permittee of WKRP-TV, Channel 29, Charleston, West Virginia. WKRP-TV is in the process of constructing its station and is not yet on the air. Channel 23 is vacant, and is subject to the Commission's freeze on filing new television broadcast applications. Order, RM-5811, Mimeo No. 4074 (July 17,

[1] The Commission currently is in the process of developing a separate ATV Table of Allotments.

1987).[2] The Commission has indicated that upon adoption of its new Table of Allotments for Advanced Television Service, it no longer will accept applications for NTSC service. Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, 7 FCC Rcd 3340, 3353 ¶ 51 (1992). Thus, it is unlikely that Channel 23 again will be available for competing applicants. Accordingly, for the reasons stated below, it is respectfully requested that a Show Cause Order be issued aimed at permitting WKRP-TV to change its channel of operation from Channel 29 to Channel 23, and for Channel 29 subsequently to be deleted from the Television Table of Allotments.

Background

WKRP-TV Inc.'s predecessor, PSA, Inc. filed its application for Channel 29 at Charleston, West Virginia on January 21, 1987. The application was designated for comparative hearing by Hearing Designation Order released on September 15, 1987, along with four competing applicants. Melvin Jones, 2 FCC Rcd 5581 (Chief, Audio Services Div. 1987). PSA was the only applicant which tendered the required Hearing Fee. The Presiding Administrative Law Judge granted the application filed by PSA and dismissed the competing applicants for failure to prosecute their applications by Memorandum Opinion and Order, FCC 87M-2799 (Nov. 6, 1987).

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[2] Columbus, Ohio is one of the cities listed in the Commission's "freeze" Order. Order, Mimeo No. 4074 (July 17, 1987). The Charleston, West Virginia reference point is 214.5 kilometers from Columbus, Ohio reference point, and therefore, is subject to the freeze. Id. at 2 n.3.

The spacing requirements contained in Sections 73.610(b) and 73.698 of the Commission's Rules requires a licensee operating on Channel 29, Charleston, West Virginia to locate its transmitter to the east of the Charleston-Huntington television market in which it will be competing in order to avoid an intermodulation "taboo" short-spacing separation. The majority of the existing, operating stations in the market are permitted, however, to locate their transmitters to the west of the City of Charleston, mid-way between Charleston and Huntington. See Attachment 1. Consequently, outdoor receiving antennas in operation in this mountainous area are oriented away from the Channel 29/Charleston site area, which will prevent members of the public from easily receiving quality television reception from Channel 29 (and requiring a Channel 29 permittee to operate at a severe competitive disadvantage vis a vis existing Charleston-Huntington television stations).[3] Operation on Channel 23, however, will permit WKRP-TV also to operate in this optimal area, west of Charleston and mid-way between Charleston and Huntington. Id. On October 31, 1989, WKRP-TV, Inc., filed a request for modification of its construction permit to permit

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[3] Antenna orientation problems are caused by the desired signals arriving from such different directions that a viewer cannot, with one receiving antenna orientation, get clear pictures from all desired stations. WTCN Television, Inc., 14 F.C.C.2d 870, 891 n.32 (Rev. Bd. 1968). Moreover, the Commission has recognized that this problem is especially acute with UHF reception vis-a-vis VHF reception. UHF reception suffers from a technical disadvantage compared to VHF reception, such that tuning is less automatic, takes more time and has a greater tendency to drift, and UHF antennas usually are required for reception, and their orientation must be relatively precise. Midwest Television, Inc., 13 F.C.C.2d 514, 526-27 ¶ 48 (I.D. 1967).

waiver of the Commission's spacing Rules to allow WKRP-TV to locate within this area.[4] That request is still pending.

Channel 23 became available as an means to improve service to the public only after WKRP-TV became a permittee in

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[4] That application requested waiver of Section 73.698 of the Commission's Rules. As WKRP-TV stated in its Statement in Support of Request for Waiver, the proposed transmitter site complies with all spacing requirements with the exception of the Commission's intermodulation spacing requirement, which requires a spacing of 31.4 kilometers. WKRP's proposed site is located 25.7 kilometers from educational station WPBY(TV), Channel *33, Huntington, West Virginia. No developed fully-spaced site exists at which WKRP-TV on Channel 29 could locate in full compliance with the Commission's rules which would allow WKRP-TV to locate its tower in the same directional area as other Charleston-Huntington market stations, in the area west of the city of Charleston, mid-way between Charleston and Huntington, adjacent to existing Station WVAH(TV), which is also licensed to Charleston, West Virginia. The proposed site is readily accessible by road in all seasons, and adequate 3-phase electrical service is readily available at the site. Moreover, the only station conceivably affected by the "taboo" short-spacing is Station WKAS, Channel *25, Ashland, Kentucky, and as demonstrated in the engineering statement included with WKRP-TV's application, in order for objectionable interference to be created, there would have to be overlap of the WKRP-TV's and WBPY's 114 dBu contours. In this case, there would be overlap of the WKRP-TV and WPBY(TV) 114 dBu contours, and thus, no interference would be created, even if WPBY were to increase its transmission facilities to the maximum permitted under the rules. In all, WKRP has argued grant of WKRP's proposal will provide significant public interest benefits by eliminating the potential for any antenna orientation difficulties for the Charleston viewing public, while allowing WKRP-TV to co-locate near existing Charleston market stations, thus reducing aeronautical and environmental concerns and allowing WKRP-TV to compete favorably with other Charleston market stations. Thus, WKRP-TV will not cause any intermodulation interference to any existing station. For all of these reasons, WKRP-TV believes that there are substantial public interest benefits which support grant of the modification application.

Nevertheless, WKRP's proposal has been opposed by West Virginia Telecasting, Inc., The West Virginia Educational Broadcasting Authority, and the Association of Maximum Service Telecasters, arguing that WKRP has not demonstrated the unavailability of less-short-spaced transmitter sites. As noted above, the modification application remains pending.

Charleston. Channel 23 in Charleston was licensed to West Virginia Telecasting, Inc., WVAH-TV, until after it became the successful applicant for Channel 11 in Charleston in 1987. West Virginia Telecasting itself changed channels of operation and began operation on Channel 11 in April 1988. Channel 23 has been vacant since that time. WVAH-TV's application for license to cover its construction permit for Channel 11 was just recently granted, on September 21, 1992.

Public Interest Benefits

In amending Section 1.420(g) which authorized intra-band exchanges of reserved and non-reserved television channels, the Commission specifically stated that it will continue to allow such within-band UHF channel modifications to occur where public interest benefits exist. Modification of FM and Television Licenses, 59 R.R.2d 1466, 1468 (1986). See also, Seattle and Tacoma, Washington, 47 Fed. Reg. 38,902 (1982).

Here, as noted above, public interest benefits exist to support grant of this Petition. At its current site area, WKRP-TV will suffer signal degradation in many areas of Charleston as a result of the mountainous terrain that exists in the Charleston region and as a result of the public's orientation of outdoor receiving antennas. See Attachment 2 at 2 (Engineering Statement filed in support of WKRP-TV request for waiver of short-spacing rules). Grant of this Petition will alleviate these problems. Id. at 15. The Commission has allowed channel substitutions to occur in the past where the grant would permit an applicant to locate at

a preferred transmitter site (i.e., its AM tower) (Campbellsville, Smiths Grove, Cave City, Horse Cave, and Liberty, Kentucky; Donelson and Mt. Juliet, Tennessee, 4 FCC Rcd 5770 ¶ 6 (Chief, Allocations Branch 1989)), and specifically has stated that permitting multiple area stations to locate at transmission sites in close proximity to one another (i.e., an "antenna farm"), is an "independent public interest benefit" supporting grant of a relocation request, which prevents the creation of unwanted competitive imbalances among stations. Elba Development Corp., 55 R.R.2d 647, 651 (1984). See also, Carolina Broadcasting Co., 18 F.C.C. 482, 484 ¶ 6 (1969) (Commission encourages use of antenna farms to promote air safety and to minimize antenna orientation problems); Indiana Broadcasting Corp., 25 F.C.C.2d 421, 424 ¶ 7 (1970) (Commission has recognized that simplification of receiving antenna orientation can be a public interest factor); WCCY, Inc., 16 F.C.C.2d 506, 535 ¶ 50 (Rev. Bd. 1969) (antenna orientation is indeed a matter of proper consideration by the Commission); WTCN Television, Inc., 14 F.C.C.2d 870, 891 (Rev. Bd. 1968). Moreover, grant of this Petition will allow WKRP-TV to locate in an developed site area, which already is readily accessible by road in all seasons and weather conditions. Attachment 2 at 3. The site area at which WKRP-TV previously was restricted was a remote, undeveloped area without adequate three-phase electrical power. Id. at 1. Thus, grant of this Petition will permit new television service to be initiated with reduced disruption to the environment. These factors cumulatively warrant grant of WKRP-TV's requested

channel change.

Additionally and simultaneously, the Commission should delete Channel 29, Charleston, West Virginia from the Television Table of Allotments. There is no public interest benefit justifying the Commission's maintainance of both commercial television frequencies (Channel 23 and 29) in Charleston. The Commission has instituted a freeze on the filing of new NTSC applications for vacant frequencies (Order, RM 5811, Mimeo No. 4074 (July 17, 1987)), and the Commission already has stated that it does "not intend to lift the current freeze on NTSC applications in major markets." Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, 7 FCC Rcd 3340, 3353 n. 146 (1992).[5] Therefore, Channel 23, as it presently is allotted, is permanently unavailable to members of the general public.

Accordingly, in light of the fact that the deletion of Channel 29 in Charleston and the simultaneous issuance of an order modifying WKRP-TV's construction permit to specify Channel 23 will permit WKRP-TV, the last NTSC permittee which will be authorized in Charleston, the flexibility to locate in the same area and direction as the majority of the other existing NTSC television licensees in the Charleston-Huntington market, and will free up additional spectrum for the initiation of ATV service, while

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[5] Further, the Commission has stated that it will cease issuing new NTSC licenses altogether once it has completed the initial assignment of ATV channels to existing NTSC licensees and permittees, i.e., two years after an ATV standard of a final Table of ATV Allotments is effective. Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, 7 FCC Rcd at 3353 ¶ 51.

eliminating the need for the Television Branch to utilize Commission resources to process and possibly grant an application that will require a waiver of its spacing rules with respect to the current WKRP-TV permit, grant of this Petition is warranted.

Ashbacker Considerations

The doctrine established in the case of Ashbacker Radio Corp. v FCC, 326 U.S. 327 (1945), does not pose a bar to grant of this request or require the acceptance of competing expressions of interest. Although the Commission acknowledged in Cheyenne, Wyoming, 62 F.C.C.2d 63 (1976), that it has a responsibility to accept competing applications when a licensee seeks to operate on an upgraded channel and there is a competing expression of interest (id. at 67-68; see also Amendment of the Commission's Rules Regarding the Modification of FM and Television Station Licenses, 98 F.C.C.2d 916, 919 (1984)), it also specifically has determined that there are no significant differences between even lower and higher UHF frequencies and "[will] not treat requests for modification to lower numbered channels as upgrading situations." Amendment of the Commission's Rules Regarding the Modification of FM and Television Station Licenses, 59 R.R.2d 1466, 1467 ¶ 5 (1986). "[A] move from one UHF channel to another...has not, by itself, been considered an upgrade with legal or policy implications to other potential applicants." Amendment to the Television Table of Allotments of Assignments to Change Noncommercial Educations Reservations, 59 R.R.2d 1455, 1462 ¶ 22

(1986).[6] As the Commission noted in denying reconsideration of its rules regarding the modification of stations licenses to "superior channels," the Commission has entertained petitions to substitute channels within the same band to overcome technical problems, and in such cases, as is being requested here, has considered and granted modifications of licenses, without the need to consider competing applications. Amendment of the Commission's Rules Regarding the Modification of FM and Television Station Licenses, 59 R.R.2d 1466, 1468 ¶ 6 (1986). See, e.g., Champaign, Illinois, 3 F.C.C.2d 506 (1966); Columbus, Mansfield and Newark, Ohio, 21 F.C.C.2d 145 (1970); El Dorado, Arkansas, 55 R.R.2d 264 (Mass Media Bureau 1983). Moreover, no member of the outside public is being deprived of the ability to apply for a frequency that would otherwise be available to it. In light of the Commission's permanent freeze with regard to the opportunity for the public to apply for television frequencies in areas surrounding the top-30 television markets, no member of the public ever would be permitted to apply for Channel 23/Charleston, West Virginia, even absent the

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[6] See also, KLOC Broadcasting Co., 7 R.R.2d 1783 (1966), where a UHF channel substitution was granted which allowed a permittee to eliminate the need to request a short-spacing waiver on its former channel. In so doing, the Commission noted that by changing a channel allotted to another city from 19 to 31, "[a] Channel 31 station would have the same relative position in the ...market as a Channel 19 station insofar as low channel numbers are concerned." Id. at 1790 ¶ 13. In a similar fashion, there is no significant difference in channel position between Channel 23 and Channel 29 in the Charleston market. As seen in Attachment 3, the only station operating on a channel that is intermediate to Channels 23 and 29 in the Charleston-Huntington market is educational reserved station WKAS, Channel *25, Ashland, Kentucky.

filing of this Petition. Thus, operation on the proposed channel "[is] not otherwise available for application by other interested parties" (Amendment to the Television Table of Assignments to Change Noncommercial Educational Reservations, 59 R.R.2d 1455, 1462 n.10 (1986)), is open for active consideration in this proceeding only due to WKRP-TV's willingness to move from its present channel, and consequently, is not subject to the Ashbacker doctrine.

WHEREFORE, it is respectfully requested that the Commission issue a Show Cause Order proposing that WKRP-TV, Inc. be ordered to change its channel of operation from Channel 29, Charleston, West Virginia to Channel 23, Charleston, West Virginia, and that Channel 29 be deleted from the Television Table of Allotments.

Respectfully submitted,

WKRP-TV, Inc.

By: _____
Dan J. Albert

1250 Connecticut Ave., N.W.
#700
Washington, DC 20036

October 8, 1992

ATTACHMENT 1

ATTACHMENT 1

ATTACHMENT 2

ATTACHMENT 2

REQUEST FOR WAIVER OF SECTION 73.610

Authorized WKRP-TV Transmitter Site

WKRP-TV presently holds a permit (FCC File Number BPCT-870121KN) authorizing construction of transmission facilities at a site located approximately 18 kilometers east of Charleston, West Virginia. The construction permit authorizes WKRP-TV to construct a tower with an overall height of 393.8 meters (1292 feet) above ground level, 771.8 meters (2532 feet) above mean sea level, and operate on Channel 29 with an effective radiated power of 5,000 kW utilizing a nondirectional antenna with a radiation center height of 454 meters (1491 feet) above average terrain.

Construction and operation of the WKRP-TV Channel 29 transmission facilities at the previously authorized location presents a number of severe difficulties. The WKRP-TV transmitter site proposed in BPCT-870121KN is located in a remote, undeveloped area which, at the present time, has no nearby three phase electrical power. The authorized WKRP-TV site will, therefore, require substantial effort and expense to fully develop, including the considerable disruption of the surrounding environment necessary to provide electrical service to the site.

Studies indicate that virtually all of the operating stations in the Charleston/Huntington area are located to the west of Charleston. The attached Exhibit V-C-1(a) is a map depicting the authorized and proposed WKRP-TV sites and the transmitter locations of the television stations currently operating in the market. As demonstrated by this map, reception of the Channel 29 transmissions from the authorized WKRP-TV site may suffer degradation in the many areas of Charleston as a result of the orientation of outdoor receiving antennas. As consistently demonstrated in many markets, the public is best served by the co-locations of all transmission facilities service a particular area.

Availability of Suitable Fully-Spaced Sites

Because of the mountainous nature of the terrain in the vicinity of Charleston, only a limited number of fully-spaced sites, most of which are atop mountains, can be used to provide the unobstructed line-of-sight paths from the Channel 29 transmitting antenna to the community as required by Section 73.685 of the Rules and Regulations. This requirement, when coupled with airspace and local land use constraints, eliminates a substantial number of fully-spaced sites at which the Channel 29 tower could be constructed. An examination of every existing developed broadcast transmitter site in the Charleston/Huntington area was undertaken in an effort to identify a developed site at which the Channel 29 transmitter could

be located in complete accordance with Sections 73.610 and 73.685 of the Commission's Rules and Regulations. No developed site was identified which would satisfy all of the applicable requirements.

Proposed WKRP-TV Site

The proposed WKRP-TV transmitter site lies within the immediate vicinity of two existing broadcast sites. The tower site presently utilized by stations WVAH-TV and WKLC-FM is located approximately 250 meters north of the proposed WKRP-TV site. The transmitter site of television broadcast station WCHS-TV is located approximately 2.1 km southeast of the proposed site. The attached Exhibit V-C-1(b) is a 7.5 minute topographic map showing the locations of the proposed WKRP-TV site and the location and heights of the nearby broadcast towers. Given the existence of tall towers in the immediate vicinity of the proposed WKRP-TV site, no difficulty in obtaining the requisite aeronautical approval is anticipated. The proposed WKRP-TV site is readily accessible by road in all seasons and weather conditions. Adequate 3-phase electrical service is also readily available. Construction of the WKRP-TV antenna tower at the proposed site would, therefore, represent an environmentally desirable

alternative to development of the previously authorized site. Finally, construction of the WKRP-TV transmission facilities at the proposed site will ensure that line-of-sight paths exist from the antenna over the entire community of Charleston, in accordance with Section 73.685 of the Rules and Regulations.

Allocation Study

The attached Exhibit V-C-1(c) is a listing of the results of a frequency search which demonstrates that, with one exception, the proposed WKRP-TV transmitter site complies with the separation requirements of Section 73.610 of the Rules with regard to the transmitter sites of all authorized or proposed stations and the reference sites of all vacant allotments. As indicated in this exhibit, the proposed WKRP-TV site is 5.7 kilometers (3.5 miles) short-spaced to station WPBY-TV on fourth alternate Channel 33+ in Huntington, West Virginia. WPBY-TV is presently authorized by the Commission (file number BPET-881130KE) to operate on Channel 33+, at a site approximately 25.7 kilometers west of the proposed WKRP-TV site, with a maximum visual effective radiated power of 1073 kW utilizing a directional antenna system with a radiation center height of 378 meters above average terrain. As demonstrated below, the short-spacing with respect to WPBY-TV, while a violation to the "taboo" separation requirements, will not result in the generation of any harmful interference.

The "taboo" separation for UHF television stations operating on fourth alternate channels was developed to avoid interference which might be created by the formation of intermodulation products within receivers subjected to high signal strengths from nearby television transmitters. That is, the UHF taboos were intended to prevent harmful interference resulting from inadequacies in the performance characteristics of UHF television receivers. In this case, the 31.4 kilometer minimum separation between stations operating on Channel 29 and 33 is intended to provide adequate separation between the transmitters to prevent interference in certain channels caused by the generation of third-order intermodulation products of the form "(2a - b)" in receivers subjected to high signal levels from both stations. For the third-order products "(2a - b)", "a" may refer to the visual or aural carrier frequency of one channel and "b" may refer to the visual or aural carrier frequency of the other. It should be noted that, because the strength of the aural signal is generally about 10 dB below the visual signal strength, the third-order spurious signals generated by combinations involving one or both of the aural carriers will not be of sufficient strength to cause interference. Eight discrete product frequencies may be generated by the various (2a - b) combinations of the visual and aural carrier frequencies of Channel 29 and 33.

Attached as Exhibit V-C-1(d), is a table detailing the calculation of all third-order products which theoretically could be formed by the combinations of the Channel 29 and Channel 33 aural and visual carriers. As indicated in Exhibit V-C-1(d), spurious signals resulting from the formation of intermodulation products in affected receivers may potentially fall into the pass-band of Channels 24, 25, 26, 36, 37, and 38. As shown in this exhibit, two of the theoretical channel combinations fall within Channel 37, which is reserved exclusively for the radio astronomy and which supports no broadcast or other transmission services. Attached as Exhibit V-C-1(e) are the results of a study of all records contained in the Commission's television database designed to identify those stations on the remaining 5 potentially affected channels nearest the proposed WKRP-TV transmitter site. As indicated in Exhibit V-C-1(e), station WKAS, Channel *25- in Ashland, Kentucky, is the only station operating on an affected channel which is located close enough to the proposed WKRP-TV site such that third-order spurious signal interference might potentially be a problem.

Analysis of Potential for Interference to WKAS

WKAS is presently licensed (FCC file number BLET-423) to operate on Channel *25-, at a site located approximately 61.1 kilometers west of the proposed WKRP-TV site, with an effective radiated

power of 162 kW utilizing a nondirectional antenna with a radiation center height of 152 meters above average terrain. The predicted WKAS Grade B (64 dBu) contour extends approximately 46 kilometers in the direction of the proposed WKRP-TV site. The attached Exhibit V-C-1(f) lists the pertinent authorized operating parameters of WKAS and the predicted distances to the station's Grade B (64 dBu) contour, as calculated in accordance with Section 73.684 of the Rules.

The greatest potential for third-order spurious signal generation in affected receivers will be at locations near the midpoint between two stations operating on undesired channels. The signal strengths of two fully-spaced alternate channel UHF stations, resulting from operation of each station with facilities equivalent to the maximum permitted under Section 73.614 (an effective radiated power of 5010 kW or 37.0 dBk at an antenna height of 610 meters above average terrain), is predicted to be approximately 114 dBu at the midpoint between the transmitters.

The 31.4 kilometer separation requirement implies that a signal strength of at least 114 dBu from two stations, operating on assigned frequencies separated by four channels, is required to cause objectionable interference to receivers tuned to the affected channels.

Although the 31.4 kilometer separation requirement for UHF stations operating on the fourth adjacent channel implies a specific level of interference protection to affected receivers, no technical basis exists for development of the separation. Specifically, the Commission, in the Third Notice of Further Proposed Rule Making (FCC 51-244, Dockets 8736, 8975, 9175, 8976), stated with respect to the intermodulation taboo:

> "Testimony in the record indicates that a three or four channel separation serve an adequate protection against intermodulation. The Commission has concluded that the best method of avoiding problems of intermodulation is to use a normal minimum separation of six channels in a city, thus allowing for a desirable safety factor. There is general agreement that a distance separation of 15 to 20 miles is sufficient to provide protection against intermodulation since sufficiently high field intensities from two or more stations would not normally exist at any point between stations so separated."

At the time the Commission adopted the UHF taboos, there was a lack of definitive data concerning the performance characteristics of UHF television receivers. Since that time some valuable data on the performance characteristics of typical UHF receivers has been developed. Perhaps the most useful data was developed by the FCC

Laboratory and published in its 1974 report entitled "A Study of the Characteristics of Typical Television Receivers Relative to the UHF Taboos" (FCC Report LAB 74-01, FCC Project No. 229-63). Attached as Exhibit V-C-1(g), is a reproduction of Figure #17 contained in the LAB 74-01 report.

This figure depicts data concerning the susceptibility of 47 tested receivers to interference, when tuned to a desired channel (n) caused by the intermodulation combinations of signals on undesired channels (n+4) and (n+8). The data depicted in this figure is pertinent to a determination of the undesired signal levels required to produce intermodulation interference to typical receivers which are tuned to WKAS on Channel 25 (n) from combination of the WKRP-TV and WPBY-TV signals, on Channels 29 (n+4) and 33 (n+8) respectively. Figure #17 of the LAB 74-01 report indicates the signal levels of the undesired Channels (n+4) and (n+8) at the input of the victim receiver necessary to cause perceptible interference on the desired Channel n. For purposes an analysis of the potential for interference to receivers tuned to WKAS, a typical receiver was assumed to exhibit interference susceptibility characteristics equivalent to the mean depicted on Figure #17 of the LAB 74-01 report.

The methodology utilized to relate receiver input power to field strength was abstracted from comments submitted to the Commission

in Docket Number 20485 (Re-evaluation and Revision of the UHF "Taboo" Table) by the Corporation For Public Broadcasting (CPB). As part of its comments, CPB submitted a comprehensive technical analysis of the FCC Laboratory data contained in LAB 74-01.

Utilizing the receiving facilities and methodology described in CPB's analysis, the signal power available at the input of a receiver located at the Grade B contour of a desired station would be approximately -65 dBm. As indicated by Figure #17 of LAB 74-01, for a typical receiver located at the Grade B contour of the desired station, the undesired signal level necessary to cause perceptible interference is -27 dBm. Again, based upon the methodology and standard receiving facilities described in the CPB analysis, the field strength necessary to provide a signal level of -27 dBm at the input of the receiver is computed to be 106 dBu. The calculation of the undesired field strength necessary to cause perceptible interference is detailed in the attached Exhibit V-C-1(h).

The attached Exhibit V-C-1(i) is a map showing the location of the transmitter site and the predicted Grade B contour of station WKAS. As demonstrated by this map, for potentially affected receiver locations, the transmitter sites of WKAS and WKRP-TV are located in opposite directions. The calculated undesired WKRP-TV field strength required to produce an input power of -27 dBm at

the input terminals of potentially affected receivers assumes that a zero-db-gain reference dipole antenna is utilized. In this case however, those receivers which could potentially be affected are located at the fringe of the WKAS service area. It is reasonable to expect that the outdoor antennas of these receivers will be oriented so as to maximize reception of the WKAS signal. A realistic assessment of the potential for interference should, therefore, take the directivity of the receiving antenna into account. Although the front-to-back ratio of typical outdoor UHF receiving antennas will vary from installation to installation, it is believed that a front-to back ratio of 10 db is reasonable. Based upon a receive antenna front-to-back ratio of 10 dB, an undesired WKRP-TV field strength of 116 dBu would be required to produce perceptible interference in receivers tuned to WKAS.

The attached Exhibit V-C-1(i) shows the proposed WKRP-TV transmitter site and the predicted F(50,50)/F(50,10) 114 and 116 dBu contours. Also shown on this map are the authorized WPBY-TV transmitter sites and predicted 114 dBu and 106 dBu service and interference contours. Since no overlap of the WKRP and WPBY contours occurs within the WKAS service area, operation of WKRP-TV with the effective radiated power, height and pattern orientation of the directional antenna at the site proposed, will not result in any potential for spurious third-order interference in receivers tuned to WKAS.